

The Fountain of Youth, updated

With the cells of unborn lambs

By Paul Ferris

LONDON. A rich young man named Peter Malcolm Stephan, who runs a London practice in "cell therapy" and is about to open up in Mexico, is another in the long line of rejuvenators who will continue to thrive as long as age and death are everyone's fate. Do you ache? Are there wrinkles? Is your sex life slipping? Tummy upset? Memory going? Can't relax? For a fee of around \$600, the 30-year-old Stephan will treat you with the cells of unborn lambs, or a serum derived therefrom. He is earnest as well as rich, a true believer in the scientific principles he likes to think dictate the therapy. Many visit him and claim benefits. Like the study of faith-healing or spiritualism, for the investigator the subject poses slippery questions about the patients' personalities and unconscious minds.

Cell therapy, invented in Switzerland 40 years ago and still going strong, is commercially the most successful stay-young treatment of all time. Scientifically, it has always been a mess. Its inventor, the aloof and arrogant Paul Niehans, a kind of de Gaulle of medicine, was never sure how it worked. He used it against specific diseases and conditions, including anemia, heart damage, certain forms of diabetes, blood pressure and impotence. He claimed to develop underdeveloped bosoms and to relieve homosexual tendencies in men and women. Toward the end of his life, he announced that cell therapy helped ward off cancer.

Niehans's real fame, however, rested on his treatment of those who were trying to overcome age. A brilliant publicist who kept the world's press perpetually hungry for crumbs from his table, Niehans was too clever to be caught blowing his own trumpet. But the rumors of famous clients multiplied over the years—rarely confirmed, never denied. Somerset Maugham, Noel Coward, Winston Churchill, the Duke of Windsor, Konrad Adenauer, Bernard Baruch, Thomas Mann, Hedda Hopper, de Gaulle himself: All were said to have arrived discreetly in Switzerland at the Clinique La Prairie, near the Montreux end of Lake Geneva, there to have fresh fetal cells pumped into their buttocks on a Thursday morning—always a Thursday—before returning, invigorated, to their country of origin.

Niehans died in 1971, at the encouraging age of 89, but his therapy lives on. (It gets a cinematic endorsement of sorts in Elizabeth Taylor's new film, "Ash Wednesday," in which the middle-aged heroine gets her dosage of cells after a harrowing facelift.) In West Germany, cell therapy is more or less respectable. Niehans had family connections there, and worked with German researchers at orthodox institutes, including the University of Heidelberg. The German Society of Cell Therapists has 550 members, and claims that another 4,000 to 5,000 doctors in the country use the method. No other country in Europe has anything remotely approaching this number. European associates of the German society total 40 or 50, and a handful more can be found around the world. Others, like Peter Stephan in London, use cell therapy but lack medical credentials. All, in a sense, are disciples of the master. Their explanations of cell therapy—how it works and what it does—frequently conflict. Schisms and heresies abound. Stephan mutters darkly about La Prairie, and La Prairie mutters darkly about him.

Amid all this, one has to report that it is easy to find patients, apparently sober and uncorrupted, who say they "feel better," and even claim a

cure for chronic conditions. A writer aged 63 told me that his osteoarthritis had gone. If Stephan's treatment is responsible, it is a major scientific event. So why does science hold back? Cell therapists point to the traditional pigheadedness of the medical establishment, faced with a new discovery like antiseptics or anesthesia. But it is equally fair, and rather more relevant, to point to the black comedy of ephemeral "cures" down the ages, all with their devotees and their apparatus of faith.

THE foundations of cell therapy were laid in the late 19th century, when various attempts were made to put rejuvenation on a scientific basis. The old specifics for staying young included the mandrake root, partridge brains, Chinese birds' nest soup, sweet potato and a powder produced from the tubers of orchids, known as salep. The Middle East exported salep in vast quantities. Multitudes swore by it. But by the time of the steamboat and the telegraph, scientific man wanted something better.

Dr. Charles Edouard Brown-Séquard (1817-1894), the son of an Irish-American sea captain and a Frenchwoman, injected himself with an extract prepared from animal testicles, and said it made him a new man. It was 1889. Brown-Séquard was 72. Living longer and feeling sexier are interlocking concepts for most of us, deeply rooted. Brown-Séquard told a distinguished academic gathering in Paris that after three injections he had put the clock back 30 years. "Today," he said, "I was able to pay a visit [a *double-entendre*] to the young Madame Brown-Séquard." Inflamed by success, Brown-Séquard built a wondrous machine with pulleys and dials for pulverizing bulls' testicles, to produce a magical liquid that would make everyone 30 years younger. Thousands came to be revitalized, but his orthodox colleagues turned against him, and the dream collapsed, like all its predecessors.

By the present century, the idea of putting tissue from one creature into another was catching the scientific imagination. The mysterious Dr. Serge Voronoff was a serious but eccentric surgeon who pioneered the transplant of glands, and became famous for inserting slices of chimpanzee testicle in male patients. His "monkey-gland" treatment, which began in 1920, had an immediate vogue. Refused permission to read a paper before the French Academy of Medicine, Voronoff called a press conference where he produced a billy goat, a ram and an elderly gentleman, all full of transplanted testicle and vigor. Niehans knew Voronoff and saw him operate.

In 1920, Paul Niehans was a distinguished surgeon, aged 38, with an impeccable background. He was unusual but not yet unorthodox. He seems to have been a gifted young man, a doctor of theology before he turned to medicine, his father's profession. During the nineteen-twenties, he became an authority on the endocrine glands (which produce hormones) and experimented successfully with glandular transplants. The key episode in his life is supposed to have occurred in 1931, when he was sent for in desperation by a Lausanne clinic. A surgeon, operating on a woman to remove her thyroid, had also removed most of the tiny parathyroids in error. This causes the calcium level in the blood to fall, resulting in the cramplike condition of tetany, which can be fatal. Niehans rushed to the scene and did the next best thing to a full transplant, injecting her with fragments of parathyroid from a freshly killed calf. She recovered: Cell therapy was born.

Niehans went on from his legitimate work to construct a great shambling edifice of pseudoscience. "Cell therapy," he wrote later, "is a selective form of treatment which aims at developing underdeveloped organs or organs which are not

(Continued on Page 40)

Opposite page, surrounded by the ingredients of his field: the late Dr. Paul Niehans, father of cell therapy.



Dr. Serge Voronoff, the Russian surgeon whose "monkey-gland" transplants for men came into vogue in 1920,

348



Peter Stephan, a modern practitioner of cell therapy in London.

348

(Continued from Page 38)

capable of regenerating themselves." He decided that by some mysterious process, cells taken from animal organs and injected into patients would revitalize the corresponding human organs. He didn't know how, exactly. He didn't seem to care much.

ALL the cell-therapy theories entwined fact and fiction in such a way that scientists as well as laymen soon get hopelessly confused. Niehans's dramatic use of parathyroid in 1931 was perfectly feasible, in itself. There is good evidence that such endocrine transplants can work temporarily. It's possible that the calf's parathyroid cells could have survived, for a while, at the site of the injection, doing the necessary biochemical work. By the time the tissue was rejected, the woman's damaged glands could have regenerated and resumed their normal function. This is very different from suggesting that the injected cells revitalized the patient's parathyroid, and it has absolutely nothing to do with Niehans's sweeping claims that he could

An elusive elixir



Ponce de León searching for the legendary Fountain of Youth in the 16th century. He never found it.

revitalize hearts with heart cells and livers with liver cells.

Cynics said that Niehans's ideas echoed the old notions of "sympathetic magic"—such as Achilles eating the bone-marrow of a lion for strength.

Niehans said it himself, reminding his readers of Paracelsus in the 16th century and his doctrine of "*Simila similibus curantur*": Like cures like.

Attacks had no noticeable effect on Niehans. He was a lordly figure, sailing high

above vulgar critics, the high priest that all the spectacular cures have needed in order to succeed. He didn't submit his work for the scientific world to judge, but made statements with a take-it-or-leave-it air. This has been

excused, ingeniously, on the grounds that he had Prussian royal blood, and so, as a Hohenzollern, felt an instinctive contempt for lesser mortals. His mother, Anna, is supposed to have been an illegitimate daughter of King Fred-

erick III of Prussia, the result of a liaison with an unknown woman in Berlin.

THE question of how the injected cells work was always left vague. Niehans said that perhaps they migrated to the damaged organs, or perhaps they stayed at the point of entry and worked from there, or perhaps they were broken down by antibodies and the cell-constituents utilized by the body. Scientifically, the inevitable outcome of injecting foreign protein is that the tissue is rejected and broken down. The contents—DNA and enzymes and the rest—are dispersed, and it is hard to see how they could reach specific organs, or what they would do when they arrived.

It is just possible that another component of cells that is currently being investigated does travel in this way. These are the chalones, thought to be part of the obscure control mechanism of cells. They are tissue-specific: That is, the skin of a pig and the skin of a man will secrete similar chalone. An injection of liver cells from an animal would contain liver chalones that could find their way to the human liver. However, if they had any effect when they arrived, it would be to temporarily stop cell reproduction, which is the opposite of what is required by cell therapy. As far as I know, cell therapists haven't written about chalones yet. A biochemist, leaning over backward to be fair to cell therapy, suggested chalones to me as the only grounds she could offer for supposing that injections of nonendocrine material would have any effect at all.

Niehans, suspiciously vague about the chemistry, was suspiciously positive about the treatment. He recommended hypothalamus cells in cases of sweating, asthma and "sexual neurasthenia." Heart cells were used for damaged hearts. Placenta cells ("rich in curative and rejuvenating powers") were used for exhaustion after childbirth, for angina, for blood pressure. At one time or another he used cells from virtually every organ. His clinic was supplied with animal tissue from a private abattoir. Sheep came to be used almost exclusively. The ewe's fetus would be removed, then the required tissues minced up and made into a fluid, and injected into the patient within an hour or two.

Niehans grew rich and fa-

mous. He is said to have been consulted when King George VI was dying in 1951. He was certainly called to the Vatican to treat Pope Pius XII in 1954. His extravagant pronouncements about cancer toward the end of his career would have been enough to undo a lesser man. Sex came into the matter, of course. (The story of Niehans's own sex life, if anyone knew it, might help to explain him. He didn't marry till he was past 40; he had no children.) "The rejuvenation of the sex glands," he wrote, "is the best protection against cancer." Scientists shrugged, but the patients kept coming.

TODAY, two years after Niehans's death, the cell-therapy business is thriving at La Prairie, the Swiss clinic. The setting is suitably affluent and discreet. The area, dotted with expensive villas, is a favorite retreat for actors, writers and film directors who are attracted by low taxes and the country's obsession with privacy. La Prairie continues the routine established by Niehans. New patients arrive for examination and tests on a Monday, then have to stay at a hotel (unless they happen to know one of the actors, writers or film directors) until Wednesday afternoon, when they are admitted to the clinic. Monday's tests are analyzed in time to have the injection program ready for Thursday morning, when the animals are slaughtered and the cells administered. Patients stay in the clinic till the following Tuesday, then leave to make way for the next wave.

Cell therapy thrives, too, at many a humbler establishment, like the consulting rooms of Peter Stephan. Stephan is plump-faced and persuasive, a likable fellow with a press kit of favorable photocopies for visiting journalists. Born in the north of England, he is the son of an Anglo-French doctor who introduced cell therapy to Britain in the nineteen-fifties. Stephan is not on the British Medical Register, and so faces none of the professional pitfalls that await the doctor who advertises.

There are surprisingly few restrictions on a lay person who wishes to use medical procedures in Britain. The law will not let him work for the State Health Service, prescribe dangerous drugs or sign a death certificate. He can, however, administer

drugs that are not specifically reserved for qualified doctors, and even undertake surgery. More than one London surgeon, struck off the Register for professional misconduct, has continued to operate on eyes or skin, legally and very profitably, using local anesthesia.

But it is always better to suggest qualifications. Stephan's glossy booklet on "Body Servicing"—he prefers not to say "rejuvenation"—refers to him as "M.D. (Hon.)." This might mean almost anything, and in fact means a degree in homeopathy awarded by Chandra Homeopathic College in India after a three-month correspondence course. Stephan told me this as soon as I inquired, adding sadly that he was often asked if it was right for him to practice, to which he always answered that it was right for him to practice cell therapy, which he understood as well as anyone in the world.

No fresh cells are available through Stephan, or through anyone in Britain. He uses cells that have been quick-frozen and vacuum-packed, a method introduced by Niehans at Heidelberg, Germany, where a company called Cybilla now produces them from its own flock of sheep under the trade name Siccacel. They come in glass ampoules, each containing about half a teaspoonful of white or brown powder. Prices vary. Stephan says that an expensive variety, such as artery cells, can cost him \$60 an ampoule, and a full treatment, covering a number of organs, might need \$250 worth.

In the lackadaisical fashion of British drug surveillance, no one has ever approved the use of the cells. Under the Medicines Act of 1971, Stephan's clinic holds a "product license as of right" to use Siccacel and associated products. This means that they can go on being used at least until the Government's Committee on Safety of Drugs studies them, as it works its way through a backlog of tens of thousands of products. This may take years. By contrast, Siccacel has so far been barred for general clinical use in the U.S. since it has not been approved by the Food and Drug Administration.

Used properly, the cells seem safe enough. A few disasters have been reported from the Continent, presumably when a patient reacts violently to the protein in a second series of injections, having been made allergic by the first. Stephan says he is

well aware of this danger, and (like Niehans) has never had a death.

How does he know which organs to treat? He questions the patient about his health, then sends him to a registered doctor for a full examination. But his prime diagnostic tool is a strange affair, unknown to orthodox biochemistry, called the Abderhalden Resistance Reaction Ferment

Test. This is performed at a German laboratory on a sample of the patient's early-morning urine. Stephan's American patients, of whom there are many, send their samples across the Atlantic in advance, so that the results will be ready when they arrive at the consulting rooms. (The clinic he has been talking about opening in Mexico next year would of course be

convenient for Americans. They can be examined by a doctor there and the report sent, with sample, to Europe, where Stephan would make a long-range diagnosis.)

When an organ is malfunctioning, says Stephan, it produces a unique ferment. It all seems beautifully simple. Organ not up to the mark, chemical test reveals all. A biochemist I consulted, Dr. Irene Gore of Brunel University, said a "ferment" was an old word for an enzyme. She found the test, as described in Stephan's literature, scientifically meaningless. If it really works, why has a biological procedure of such breathtaking importance been ignored for years by orthodox scientists?

After he identifies the trouble, Stephan chooses the treatment. If the dried cells, reconstituted in liquid form, are to be used, a series of injections will be given at one session. However, most of Stephan's patients are now treated by suppository, and what they get isn't actually cells, but antibodies, in the form of a serum obtained from animals which have been injected with the appropriate cells.

This is where the thread of scientific logic becomes difficult to follow. Again, to Stephan it's simple. It is not the lamb cells themselves that travel to the afflicted organ, but "the vital nucleic acids and hormones" therein. That is one statement. Following another tack, Stephan says (quite rightly) that antibodies will be produced in the blood to attack foreign material that has been injected. It is these antibodies, he says, that revitalize the cells.

Stephan leaned back, smiling, after this explanation. On our left was a handsome desk, on my right an examination couch, with stethoscope and blood-pressure gauge in sight. At a previous interview he had spoken of how the DNA from the new cells was attracted to the DNA in the ailing ones. When I asked how, exactly, he looked it up in a book, without success, and said: "I'm afraid you'll have to take my word for it." This time I concentrated on the antibodies. Why should antibodies make the cells healthier?

"That's a bloody good question," said Stephan. He stared at me for nine or ten seconds before answering: "They will stimulate the cells by a reaction which is not unlike a fight." He continued uncer-

tainly for a while, then said that for a proper explanation he must consult the laboratory at Lausanne where the serum is produced. Later, after talking to Lausanne, he sent me the official wording: "When the Antibody attacks the Cell, the shock involved enables the Cell, together with the help of the Nervous System, to defend itself and, in so doing, gives the Cell a terrific boost and aids the recycling process." It didn't seem to add much to the sum of human knowledge.

STEPHAN says that more than half his patients are from outside the United Kingdom. They are divided about equally between men and women. The chief thing they are complaining of is tiredness, followed by sexual difficulties (men) and physical appearance (women). In a four-day week recently he saw 12 new patients (and many old patients, returning for follow-ups and checks). From overseas came a Trinidad banker (impotent), a U.S. ex-banker (liver condition), a Ghanaian (impotent), a Portuguese woman (tired, rheumatic) and a U.S. woman (tired, overweight).

Assuming 15 new patients in an average week, each paying \$600 in a 50-week year, his gross income wouldn't be far short of half a million dollars. I image it's substantially more than this. The car parked outside with the personalized number-plate, PMS 18, is eye-catching even by the standards of the surrounding Harley Street district, where private medicine thrives behind liver-colored walls. It's a new Rolls-Royce Corniche, value not less than \$40,000.

I spoke to three of Stephan's British patients who have been treated in the last year or two. Robert Chartham, 63, is a writer on sexology, whose notes appear frequently in the sex magazine *Forum* and the men's magazine *Penthouse*. Chartham doesn't look his age. He says: "I can't understand why it happens or how it happens. All I know is that it happened to me. I had his treatment two years ago. For 15 years before that, I was crippled with osteoarthritis. In really bad winter months, I was able to get about only on all fours. Within a few months of the treatment, I was getting no pain, not a twinge. Now I swim half a mile a day. And I had every orthodox treatment. I've even allowed myself to be a guinea pig for drugs, one of which

landed me in the loony bin for about six weeks."

Chartham's treatment, by suppository, included serum for thyroid, pituitary, thymus, suprarenal, reticuloendothelial system, testes, heart and arteries, liver, gall bladder, spleen, kidneys, lung, skin, and large and small intestine. There doesn't seem much left after that. Chartham says: "Frankly, I don't care a bugger how it works. Is it possible to regenerate cells? Medically speaking, I would think not. But there must be something in it."

As a bonus, Chartham found his sex life had improved, though he hadn't been complaining before. "When I was younger," he says, "I could have three or four orgasms with the same erection. For the past 10 or 11 years, I've not been able to do that—until after my first treatment with Stephan. Now I can manage multiple orgasm once or twice a month, which isn't bad at 63."

The second patient I spoke to was Sheila Black, a middle-aged financial journalist, now with *The Times* of London, who was treated in 1971. She says she was depressed, overworked and generally run-down. A relative who is a doctor took the view that if one could afford cell therapy, why not have it? This must be the thinking behind much unorthodox medicine: People pay for hope and find it cheap at the price. Miss Black had the injections. Afterward, "I met a rather well-known actress, and she said, 'Christ, have you had your face lifted or something?'"

Finally, I spoke to a doctor in his 50's who has a practice a few hundred yards from Stephan and sends him patients. He insisted on being anonymous, lest he find himself in trouble with the medical authorities for passing patients to a nonmedical practitioner. He says he was overworked and tired, and cell therapy made him feel better. "Maybe it's all psychological," he said. "That's certainly got a lot to do with it. A woman reads his booklet, 'Body Servicing'—you've seen it? She sees there that her cells need regenerating. 'That's it!' she thinks. It all hangs together medically—it doesn't, actually, but she thinks it does. Someone like that is 90 per cent cured before she even has the injection."

A PART from Stephan, the cell-therapy scene in London consists chiefly of a few doctors

who use the treatment in their ordinary practices. As far as British medical authorities are concerned, cell therapy is either a joke or a scandal. Dr. Alexander Comford, the British gerontologist, says flatly that "pseudomedical techniques based on cell extracts . . . are charismatic frauds." One London doctor who uses cell therapy judiciously, Wyndham Davies—a former member of Parliament—retorts that no one of standing in British medicine has examined the technique. Doctors like Davies also deny there is any fraud among reputable cell therapists. Davies talks modestly of what the treatment might be able to achieve in the future, adding: "There are always fashions in medicine. At the moment, it's the overuse of drugs of various sorts. There may be a reaction against this, and a return to more physiological methods of treatment. Cell therapy could be one of these."

Davies hopes to form a British Society of Cell Therapists; at present, it is likely to be rather small. He is on good terms with the La Prairie clinic, unlike Stephan, who complains that they tell people he's a quack. So they do: They told me within minutes when I telephoned. Stephan, advised of this, says stiffly that he does not wish to indulge in petty bickering, and stands firm on his reputation.

La Prairie regards itself, naturally enough, as world headquarters. Its spokesman informed me that dried cells had nothing like the potency of the fresh material as administered in Switzerland. Dr. Davies disagreed with this, and thought the fresh cells were only "marginally" better. Stephan, reacting with his usual crispness, said it was absolute rubbish.

The clinic insists that the results with dried cells are no more than 20 per cent as good as those obtained with fresh tissue. This is certainly bad news for the worldwide movement, if taken literally. Will everyone have to keep flocks of sheep and use fresh cells? But literally, perhaps, is not how one should take anything about cell therapy. According to Dr. Davies, U.S. interests recently have been bidding up to \$10-million for La Prairie. What they are trying to buy is a slice of a dream: a very marketable product at any time in history, let alone now. ■

